



**PATENT**

Attorney Docket No.: 772490100015

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant : Harris, Michael G., et al.  
Serial No. : 10/022,706  
Filed : December 17, 2001  
For : **POLYETHYLENE MELT BLENDS FOR  
HIGH DENSITY POLYETHYLENE  
APPLICATIONS**  
Art Unit : 1772  
Examiner : Sandra Rayford

**DECLARATION UNDER 37 C.F.R. § 1.132**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

I, MICHAEL G. HARRIS, do hereby declare:

1. I am a named inventor of United States Patent Application Serial No. 10/022,706 (the '706 application), filed December 17, 2001, and entitled "Polyethylene Melt Blends for High Density Polyethylene Applications."

2. I am currently a materials engineer at Hancor, Inc., the assignee of the '706 application.

3. I make this declaration in support of an Amendment After Final to the '706 application to provide evidence in support of the subject matter of the pending claims.

4. In my capacity as a materials engineer at Hancor, Inc., I have directed the testing of various polyethylene melt blends including those listed in Examples 1, 2 and 3 below. Each of the blends listed in Examples 1, 2 and 3 is a melt blend of the three polyethylenes listed in the

proportions listed and each has a environmental stress crack resistance ("ESCR") that is **less than 24 hours** (as measured by a Notched Constant Tensile Load test using the ASTM D5397 test method).

**Example 1**

<b>Blend Material</b>	<b>Blend Fraction</b>	<b>MFI</b>	<b>Density</b>	<b>ESCR</b>
HMW HDPE	0.28	0.06	0.949	--
LMW Homopolymer HDPE	0.5	0.7	0.963	--
LLDPE	0.22	0.71	0.925	--
<i>Blend Properties</i>		0.353	0.951	<b>15 hrs</b>

**Example 2**

<b>Blend Material</b>	<b>Blend Fraction</b>	<b>MFI</b>	<b>Density</b>	<b>ESCR</b>
HMW HDPE	0.27	0.05	0.949	--
LMW Homopolymer HDPE	0.51	0.66	0.963	--
LLDPE	0.22	0.95	0.925	--
<i>Blend Properties</i>		0.356	0.951	<b>17 hrs</b>

**Example 3**

<b>Blend Material</b>	<b>Blend Fraction</b>	<b>MFI</b>	<b>Density</b>	<b>ESCR</b>
HMW HDPE	0.41	0.08	0.948	--
LMW Homopolymer HDPE	0.5	0.66	0.964	--
LLDPE	0.09	0.4	0.924	--
<i>Blend Properties</i>		0.266	0.954	<b>13 hrs</b>

5. I hereby declare that all statements made herein are of my own knowledge are true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under 18 U.S.C. § 1001 and that such willful false statements may jeopardize the validity of the application or any patent issued.

Signed this 15<sup>th</sup> day of December, 2004.

  
Michael G. Harris